

**AMENDMENTS TO THE CLAIMS**

*The following listing of claims will replace all prior versions of claims in the application.*

1. (Currently Amended) A computerized method for interactive visual analysis of interactions among entities, ~~where entities are individuals or groups, which~~ the method comprising comprises:

collecting interaction data among three or more entities, wherein each entity is an individual or a group of individuals, and wherein at least two entities directly interact with multiple entities;

computer processing said collected interaction data with connectivity and diversity measures, wherein connectivity is a measure for assessing how well said entities are connected to their environments and diversity is a measure for assessing how diverse said entities are in their interactions with or connections to their environments, and wherein an environment of each entity comprises at least one entity; and

displaying said processed interaction data and appropriate raw interaction data for interaction analyses.

2. (Original) The method of claim 1, wherein said collecting interaction data comprises use of network surveys.

3. (Original) The method of claim 1, wherein said collecting interaction data comprises monitoring of e-mail traffic.

4. (Original) The method of claim 1, wherein said collecting interaction data comprises monitoring of telephone traffic.

5. (Original) The method of claim 1, wherein said collecting interaction data comprises monitoring of access to shared resources.

6. (Original) The method of claim 1, wherein said connectivity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities.

7. (Original) The method of claim 6, wherein said connectivity measure employs the following mathematical formula:

$$C(E, L) = \sum_{1 \leq k \leq N} [w(k) + C(k, L-1)/f_d]$$

$$C(E, 0) = 0$$

where  $C(E, L)$  denotes connectivity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions,  $w(k)$  is the weight of direct interactions from  $k$ , and  $f_d$  is the decay factor.

8. (Original) The method of claim 1, wherein said diversity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities.

9. (Original) The method of claim 8, wherein said diversity measure employs the following mathematical formula:

$$D(E, L) = \sum_{1 \leq k \leq N} [v(k, p) + D(k, L-1)/f_d]$$

$$D(E, 0) = 0$$

where,  $D(E, L)$  denotes diversity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions, and  $v(k, p) = 0$  if the property of  $k$  along the diversity dimension of interest is already within  $p$ , where  $p$  is a set of properties encountered so far, including the property of  $E$  or otherwise,  $v(k, p) = 1$ .

10. (Original) The method of claim 1, wherein said displaying said processed interaction data comprises generating an organization view where interactions among entities of an organization are represented graphically.

11. (Original) The method of claim 1, wherein said displaying said processed interaction data comprises generating a group view where entities of a predefined group and their pre-specified attributes are represented graphically.

12. (Original) The method of claim 1, wherein said displaying said processed interaction data comprises generating an individual view where interactions relating to a specific entity are represented graphically.

13. (Original) The method of claim 1, wherein said displaying said processed interaction data comprises generating a cluster view where interactions among predefined units of entities are represented graphically.

14. (Original) The method of claim 1, wherein said displaying said processed interaction data

comprises generating a people map where said connectivity and diversity measures for predefined units of entities are represented graphically.

15. (Original) The method of claim 1, wherein said displaying said processed interaction data comprises generating a topical view where the view generated is dependent upon a predetermined interaction topic.

16. (Original) The method of claim 1, which further comprises generating a report based on results of the interaction analysis.

17. (Currently Amended) A system for interactive visual analysis of interactions among entities, the system comprising: where entities are individuals or groups, which comprises:

a computer having a microprocessor and a storage unit;

a database electronically coupled to said computer for storing interaction data among three or more entities, auxiliary information and any additional data derived from said interaction data, wherein each entity is an individual or a group of individuals, and wherein at least two entities directly interact with multiple entities;

algorithms stored in said storage unit and operable by said microprocessor for measuring connectivity and diversity of entities based on their interactions, wherein connectivity is a measure for assessing how well said entities are connected to their environments and diversity is a measure for assessing how diverse said entities are in their interactions with or connections to their environment, and wherein an environment of each entity comprises at least one other entity;

a set of programs for accessing interaction data and generating views dynamically;

a display screen electronically coupled to said computer for providing a user interface, said user interface providing appropriate controls for displaying and interactively manipulating each generated view;

a user input device electronically coupled to said computer; and

a user selectable element of said user interface being responsive to user input via said user input device to generate a report based on analysis results.

18. (Currently Amended) A computerized method for interactive visual analysis of interactions among entities, the method comprising: where entities are individuals or groups, which comprises:

collecting interaction data among three or more entities, wherein each entity is an individual or a group of individuals, and wherein at least two entities directly interact with multiple entities;

computer processing said collected interaction data with a connectivity measure for assessing how well said entities are connected to their environments, wherein an environment of each entity comprises at least one other entity, and wherein said connectivity measure employs a decay factor to account for the effects of indirect interactions among entities and is a recursive mathematical algorithm in the form of:

$$C(E, L) = \sum_{1 \leq k \leq N} [w(k) + C(k, L-1)/f_d]$$

$$C(E, 0) = 0$$

where  $C(E, L)$  denotes connectivity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions,  $w(k)$  is the weight of direct interactions from  $k$ , and  $f_d$  is the decay factor;

computer processing said collected interaction data with a diversity measure for assessing

how diverse said entities are in their interactions with or connections to their environments, wherein said diversity measure employs a decay factor to account for the effects of indirect interactions among entities and is a recursive mathematical algorithm in the form of;

$$D(E, L) = \sum_{1 \leq k \leq N} [v(k, p) + D(k, L-1)/f_d]$$

$$D(E, 0) = 0$$

where,  $D(E, L)$  denotes diversity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions, and  $v(k, p) = 0$  if the property of  $k$  along the diversity dimension of interest is already within  $p$ , where  $p$  is a set of properties encountered so far, including the property of  $E$  or otherwise,  $v(k, p) = 1$ ; and

displaying said processed interaction data and appropriate raw interaction data for interaction analyses.